

W E S T

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FACSIMILE COVER SHEET

Date	Wednesday, February 09, 2000
Deliver to	eva chu
Name of Firm	Alameda County Environmental Health Department
Fax Number	510 337-9335
From	Steve Michelson

NUMBER OF PAGES: This cover page plus 4 page(s)**Remarks**

Dear Ms. chu:

Per your discussion earlier today, attached for your review is the *Work Plan for Supplemental Investigation* at the Pacific Galvanizing facility located at 715 46th Avenue in Oakland, California.

Please call me at 415-485-1660 if you have any questions or wish to discuss this further.

Sincerely,



Steven Michelson
Geologist

Should a soil sample be
collected for WET test?

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February 9, 2000

Ms. eva chu
Hazardous Materials Specialist
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6700

Subject: Work Plan for Supplemental Investigation at Pacific Galvanizing
715 - 46th Avenue, Oakland, California

Dear Ms. chu:

Pursuant to our telephone conversation on January 10, 2000, World Environmental Services and Technology (WEST) has developed this Work Plan for Supplemental Investigation ("Work Plan") to characterize groundwater at Pacific Galvanizing, 715 - 46th Avenue, Oakland, California ("the Site"). This Work Plan has been developed in response to concerns over potential impacts to groundwater, expressed by the Alameda County Health Care Services Agency (ACHCSA) following review of the *Site Investigation Report* (WEST, October 15, 1999).

Introduction

The Site is located in Oakland, California, on the northeast corner of Coliseum Way and 46th Avenue. Adjacent properties currently include Bostrom Bergen Metal Products to the south, Coliseum Way and Interstate 880 to the west, Union Pacific railroad corridor to the east, and the Spa Company and Reliance Systems to the north.

Industrial activities at the Site consist of metal galvanizing. The investigation area is approximately 40 feet wide and is located in the northern portion of the Site ("the Alley"; see Figure 1). The Alley is leased from Alameda County by Pacific Galvanizing for storage of equipment. A portion of the ground surface is covered with concrete. Beneath the Alley is a buried storm drain owned and operated by Alameda County.

A grab groundwater sample collected from beneath the Alley by WEST in 1997 was reported to contain less than 0.050 milligrams per liter (mg/l) of dissolved lead, and 0.68 mg/l of dissolved zinc. The pH of the groundwater sample was reported by the analytical laboratory at 7.5 Standard Units (S.U.).

Soil encountered in the upper 5 feet was characterized as clay, sand, and gravel with occasional peat fill. Soil samples collected from 5 feet below ground surface (bgs) have revealed concentrations of lead ranging from 22 mg/kg to 5,300 milligrams per kilogram (mg/kg), zinc from 490 mg/kg to 130,000 mg/kg, and pH from 5.5 S.U. to 8.5 S.U.

Ms. Eva Chu
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A plan has been developed to perform limited hot spot excavation to reduce residual concentrations of lead and zinc in soil and installation of a concrete cap. The ACHCSA has indicated that backfill associated with the buried storm drain is a potential preferential migration pathway for groundwater. Prior to installation of the cap, the ACHCSA has requested an additional groundwater sample from the Alley (telephone discussion with ACHCSA, January 10, 2000).

In response to the ACHCSA request, this Work Plan has been developed to collect a grab groundwater sample in the Alley, in the vicinity of the downgradient extent of the buried storm drain. The grab groundwater sample will be analyzed for dissolved concentrations of lead and zinc. Implementation of the limited hotspot excavation and capping the alley is contingent upon the analytical results of the dissolved lead and zinc in groundwater being below groundwater protection standards. Details of the proposed groundwater sampling are presented below.

Groundwater Sampling and Analysis

Based on discussions with the ACHCSA, a plan has been developed to characterize groundwater beneath the Alley. Implementation of the groundwater sampling effort in the field is anticipated during the week of February 28 or March 6, 2000. The ACHCSA will be notified at least 48 hours prior to the groundwater investigation at the Site.

Prior to collection of a groundwater sample, a subsurface utility survey will be performed at the Site and permits will be obtained. Underground Services Alert (USA) will be used to locate utilities entering the Site, and a private underground utility locating contractor will be used to identify utilities on the Site in the vicinity of the area proposed for groundwater sampling. Appropriate permits will be obtained from Alameda County Flood Control Zone 7 and the City of Oakland.

A grab groundwater sample will be collected from a soil boring advanced in the northwest corner of the Site (see Figure 1). This location is downgradient with respect to the reported flow direction within the buried storm drain and the inferred groundwater gradient. The actual sampling location is contingent upon access limitations (i.e., site features, utilities) and the final location may be moved to the closest accessible point.

The soil boring will be advanced using hydraulic direct-push equipment to approximately 3 feet below the top of the ~~groundwater~~ surface, which is ~~anticipated to be~~ approximately 8 feet to 10 feet bgs. Soil samples will be collected continuously for lithologic description between ground surface and groundwater. Soil samples will not be collected for chemical analysis.

When total depth has been reached, 3/4-inch diameter PVC casing will be placed temporarily in the borehole to provide access to groundwater. The grab groundwater sample will be collected using a disposable PVC bailer within the PVC casing. The groundwater sample will be transferred to an unpreserved 250-ml plastic container. The grab groundwater sample container will be labeled and placed in an insulated, chilled cooler. The sample will be transported to a California State-certified laboratory under standard USEPA chain-of-custody protocols.

Photo 2m
detected to 5' bgs
should sample
5' to 8' bgs
do WET if necessary

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The laboratory will measure the pH of the grab groundwater sample using EPA Method 9045. The laboratory will also filter the grab groundwater sample using a 0.45-micron filter and then analyze the sample for dissolved lead and zinc using EPA Methods in the 6000/7000 series.

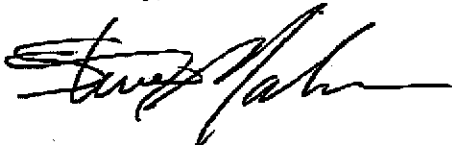
After sample collection, the borehole will be sealed with a bentonite-grout mix and the ground surface will be restored using similar replacement materials (i.e., asphalt or cement).

Reporting

A report will be submitted within four weeks of receipt of laboratory analytical data. The report will include a summary of the field methods performed, observations, and the analytical data provided by the laboratory. A figure depicting the groundwater sampling location will be included in the report. The report will be signed and stamped by a California Registered Geologist and/or Professional Engineer.

Please call me at 415/460-6770 if you have any questions or wish to discuss this further.

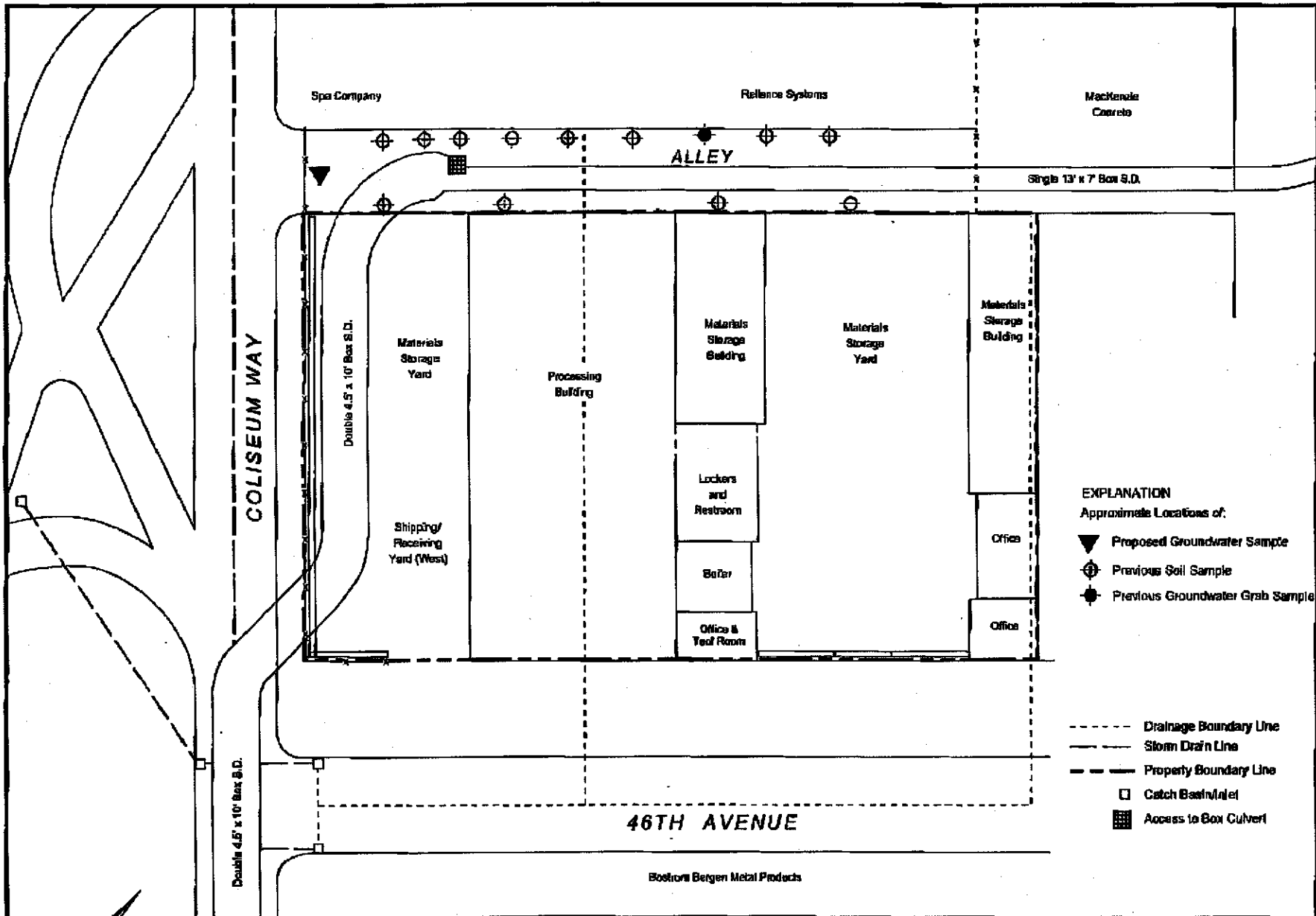
Sincerely,



Steven I. Michelson, R.G.
Geologist

Attachment

cc: Jack Schultz, Pacific Galvanizing



- EXPLANATION**
Approximate Locations of:
- ▼ Proposed Groundwater Sample
 - ⊕ Previous Soil Sample
 - Previous Groundwater Grab Sample
 - - - Drainage Boundary Line
 - Storm Drain Line
 - - - Property Boundary Line
 - Catch Basin/Inlet
 - ▣ Access to Box Culvert

0 40
Approx. Scale in Feet
January 2000

Figure 1: Proposed Groundwater Sample Location

Pacific Galvanizing • Oakland, California

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